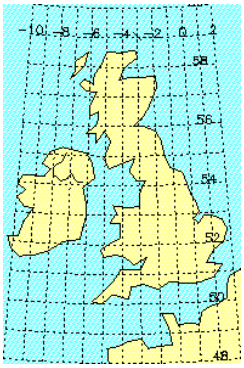
Horizontal Grid for Input and Output



The *meteorological data* is on a 1 degree longitude by 1 degree latitude equal-angle grid covering the entire globe (64,800 regions). The image on the right is a detailed sample of the grid covering England. The data is generated using the NASA Goddard Earth Observing System - Version 4 (GEOS 4) Multiyear Assimilation Timeseries Data. The GEOS 4 data set has a spacing of 1.25 degrees of longitude by 1 degree of latitude. Bilinear interpolation is used to produce 1 by 1 degree regions.

The *solar energy data* is generated using the Pinker/Laszlo shortwave algorithm. Cloud data is taken from the International Satellite Cloud Climatology Project DX dataset (ISCCP). ISCCP DX data is on an equal area grid with an effective 30x30 km pixel size. The output data is generated on a nested grid containing 44,016 regions. The nested grid has a resolution of one degree latitude globally, and longitudinal resolution ranging from one degree in the tropics and subtropics to 120 degrees at the poles. This, in turn, is regridded to a one degree equal-angle grid (360 longitudes by 180 latitudes). The regridding method is by replication, wherein any grid region that is larger than 1x1 degree is subdivided into 1x1 degree regions, each with the same value as the original.